



# Harp Basic LT

DIAGNOSTIC AUDIOMETER

**CLASSIFICATION**

IEC 60645-1: Type 2 Class A/AE  
ANSI S3.6: Type 2A/2AE

**AVAILABLE SIGNALS**

Stimulus: pure tone, warble tone  
2 external inputs for speech audiometry  
MIC input for live speech audiometry  
Masking: NBN, WN, SN

**SIGNALS SPECIFICATION**

Attenuator step: 1 and 5 dB  
Presentation: Continuous, Pulsed (0.5, 1 and 2 Hz)  
Warble: 5 Hz sin wave modulating signal

**AVAILABLE OUTPUTS AND TRANSDUCERS**

AC: TDH-39 / DD45 headphones, ER-3 insert earphones  
BC: B-71 bone vibrator  
Free field  
Insert masking earphone: IME-100

**AVAILABLE TESTS**

- Pure Tone audiometry
- Auto threshold (modified Hughson-Westlake)
- Speech audiometry (2 channels)
- ABLB
- SISI: automatic score; 1 dB increment (5 dB for familiarization)
- Stenger, with pure tone or speech stimulation
- Tone decay, with 60 or 120 sec. duration
- DLI, with increments between 0 and 5 dB
- 2 independent channels Master Hearing Aid

**PURE TONE: FREQUENCIES AND MAXIMUM LEVELS (dB HL)**

Freq. (Hz)	AC TDH-39 DD45	AC ER-3	AC ER-5(*)	BC	FF (**)
125	80	90	90	-	75
250	100	105	100	45	85
500	110	110	110	65	95
750	115	115	120	70	95
1.000	120	120	120	75	95
1.500	120	120	120	80	95
2.000	120	120	115	80	95
3.000	120	120	115	75	95
4.000	120	110	110	75	95
6.000	105	95	100	55	90
8.000	95	90	90	50	85

(\*) Transducer supported but no more available for purchasing

(\*\*) The values refer to "normal" range; add 10 dB to each value in case of "extended range" option selected

**SPEECH AUDIOMETRY: MAXIMUM LEVELS (dB HL)**

AC (*) TDH-39 DD45	AC ER-3	AC ER-5	BC	FF
100	100	100	55	Normal: 75 Extended: 85

(\*) Reduce by 20dB in case of free field equivalent filter activation.

**PATIENT – OPERATOR COMMUNICATION**

Talk over: built-in or external microphone  
Talk back: through built-in speaker or monitor headset (included); patient microphone included  
Patient response trigger

**MONITOR SIGNAL**

Both channels monitored through the built-in speaker or monitor headset

**INTERNAL DATABASE**

Up to 100 patients both AC and BC thresholds (only pure tone exams)

**CALIBRATION**

Validity: 12 months  
All the parameters set through the device software

**COMPUTER INTERFACE**

Connection: USB (driverless)  
Compatible software: Inventis Maestro

**HYBRID TECHNOLOGY**

Description: Harp can be controlled either as a stand-alone or as a PC-controlled audiometer  
It requires Inventis Maestro software

**DISPLAY**

Live display of the graph of all the tests  
Type: Graphical colour TFT LCD  
Size: diagonal 4.3", 95 mm x 54 mm  
Resolution: 480 x 272

**POWER SUPPLY**

Maximum consumption: 8 Watts  
Power supply: 6V, 2A cont., through an external medical grade 100-240 Vac 50/60 Hz power supply

**MECHANICS**

Without integrated printer:  
Size (WxDxH): 32 x 32 x 9 cm / 12.6 x 12.6 x 3.5 in  
Weight: 1.8 Kg / 4.0 lbs

**FREIGHT PACKING**

Size (WxDxH): 47 x 40 x 35 cm / 18.5 x 15.8 x 13.8 in  
Gross weight: 4.2 Kg / 9.3 lbs



#### APPLICABLE STANDARDS

Pure tone audiometry: IEC 60645-1, ANSI S3.6  
 Speech audiometry: IEC 60645-1, ANSI S3.6  
 Calibration: ISO 389-1 (TDH 39 and DD45), ISO 389-2 (ER-3 and ER-5),  
 ISO 389-3 (B71), ISO 389-7 (FF)  
 Electrical safety: IEC 60601-1, Class I type BF  
 EMC: IEC 60601-1-2

#### CE CERTIFICATE

93/42/EEC classification : Class IIa  
 Classification rule (Annex IX, 93/42/EEC): 10  
 Notified body: TÜV SÜD Product Service GmbH (0123)

#### PRODUCT CODES

11135: Harp model Basic LT – Diagnostic audiometer

#### INCLUDED PARTS

- DD45 supra-aural headphones
- B71 bone vibrator
- Patient response switch
- Monitor headset with boom microphone
- Clip-on microphone for patient-to-operator communication
- Medical grade power supply
- USB connection cable

#### OPTIONAL ACCESSORIES (with order code)

- 10833: ER-3C insert earphones
- 10177: IME-100 insert masking earphone
- 10181: Desktop microphone for live speech tests
- 10179: Amplivox Audiocups noise excluding enclosures for TDH-39 / DD45 headphones
- 10180: Cable set for sound booth
- 10182: Soft carrying case
- 10266: One active speaker FBT J-5A

Harp is developed by:

#### **INVENTIS s.r.l.**

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